DOCUMENT RESUME

ED 477 994 CS 512 034

AUTHOR	Manery, Rebecca
TITLE	Cosmic Oranges: Observation and Inquiry through Descriptive Writing and Art.
INSTITUTION	MarcoPolo Education Foundation.; National Council of Teachers of English, Urbana, IL.; International Reading Association, Newark, DE.
PUB DATE	2003-03-06
NOTE	13p.
AVAILABLE FROM	Managing Editor, ReadWriteThink, International Reading Association, 800 Barksdale Rd., P.O. Box 8139, Newark, DE 19714-8139. E-mail: comments@readwritethink.org. For full text: http://www.readwritethink.org/lessons.
PUB TYPE	Guides - Classroom - Teacher (052)
EDRS PRICE	EDRS Price MF01/PC01 Plus Postage.
DESCRIPTORS	*Art Education; Attention; Audience Awareness; *Descriptive Writing; Evaluation Methods; Figurative Language; Internet; Middle Schools; National Standards; *Observation; Poetry; *Writing Instruction
IDENTIFIERS	International Reading Association; National Council of Teachers of English

ABSTRACT

The writing and art program described in this lesson plan employs scientific observation, descriptive writing, sketching, reading, investigation, and poetry writing to train middle school students to use their senses and focus their attention. During the four 45-minute lessons, students will: make careful observations of natural objects; write concise, objective, detailed descriptions; write with purpose and a clear sense of audience; use sensory observation and sense memory to write descriptively; differentiate between objective and subjective description and understand the uses of each; ask questions and use written materials and Internet resources to find answers; read with purpose; use writing, speaking, and art to demonstrate knowledge; reflect on their knowledge of the processes of observation, focused attention, and inquiry, and apply their knowledge to other academic and real-world contexts; and use figurative language, including simile and metaphor. The instructional plan; lists of conventional, required, and web resources; student assessment/reflection activities, and a list of National Council of Teachers of English/International Reading Association (NCTE/IRA) Standards addressed in the lesson are included. An anticipation guide, two observation sheets, and an Internet research sheet are attached. (PM)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 477 994

Cosmic Oranges: Observation and Inquiry Through Descriptive Writing and Art

Author

Rebecca Manery
Chicago, Illinois

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

J M Irwin

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

1

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Grade Band

6-8

Estimated Lesson Time

Four 45-minute sessions

Overview

This lesson employs scientific observation, descriptive writing, sketching, reading, investigation, and poetry writing to train students to use their senses and focus their attention. The lesson is designed to enhance cognitive skills used in nearly every discipline and can serve as a prelude to an inquiry project, scientific investigation, art project, or descriptive writing assignment. When students truly learn to see, they are on the path to becoming more engaged, curious, reflective thinkers.

From Theory to Practice

Short, K., Kauffman, G., & Kahn, L. (2000, October). "I just *need* to draw": Responding to literature across multiple sign systems. *The Reading Teacher, 54,* 160–171.

- By constructing meaning in a variety of ways, including drawing, scientific observation, and poetry writing, students can form more complex understandings of the subject under study.
- "By engaging in transmediation across sign systems . . . [children are] encouraged to think and reflect creatively and to position themselves as meaning makers and inquirers." (Short, Kauffman, & Kahn, 2000).

Student Objectives

Students will

- Make careful observations of natural objects
- Write concise, objective, detailed descriptions
- Write with purpose and a clear sense of audience
- Use sensory observation and sense memory to write descriptively
- Differentiate between objective and subjective description and understand the uses of each
- Ask questions and use written materials and Internet resources to find answers
- Read with purpose
- Use writing, speaking, and art to demonstrate knowledge
- Reflect on their knowledge of the processes of observation, focused attention, and inquiry, and apply their knowledge to other academic and real-world contexts

CS 512 034

BEST COPY AVAILABLE

- Use figurative language, including simile and metaphor

Resources

- **Optional resources:**

  Scale (scientific or kitchen)

  Measuring tape (or string and rulers)

  Magnifying glasses

  Oranges by John McPhee (Farrar, Straus and Giroux, 1967)

  "Perfection" by William Carlos Williams [reprinted in *In the Palm of Your Hand* by Steve Kowit (Tilbury House, 1995)]

  Oranges Anticipation Guide

- **Required materials:**

  10-15 oranges

  Folders (1 for every 3-4 students)

  Unlined paper

  Chart paper or overhead transparencies

  Paper towels

  Computers with Internet capability

  Observation sheet #1

  Observation sheet #2

  Internet research sheet

- **Web resources:**

  Sweet Oranges: The Biogeography of Citrus sinensis

  Abecitrus

  Tropicana.com

Instructional Plan

Preparation

It is strongly recommended that you complete each of the assignments first, including the observation, writing, drawing, and online research. By doing this, you can provide models, make modifications based on the age and abilities of your students, increase or decrease time allotments, and find solutions to possible glitches.

Instruction and Activities

PART I. Seeing and drawing (45-50 minutes)

1. Divide the class into groups with 3 to 4 students per group. Give each group a folder and an orange, and each student a copy of observation sheet #1. (The two pages can be photocopied back to back.) Explain:

You are explorers from another galaxy. You have landed in a remote area of this planet. As soon as you leave your space ship, you find a number of these objects scattered on the ground. You have never seen anything like them and are not sure what they are. Your mission is to study the object as carefully as you can, making notes and asking questions on your observation sheet. Then, write a detailed description to beam back to your high commander. Be careful not to cut or damage the object in any way. You should use as many of your senses as possible, and any instrument available to you that will not damage the object. Each member of your crew should come up with his or her own notes and description, but you may compare and discuss if you like. If questions about the object come up, write them down. You have twenty minutes to complete your description.

2. While students are working, move from group to group, coaching students to use their senses, ask questions, and use specific, accurate descriptions. If your students do not have access to scales or tape measures, encourage them to use comparisons (e.g., about the size of a fist; weighs about as much as a juice box).

3. Invite a few students to read their descriptions aloud and ask the class for feedback. Point out and praise specific details; if students have made assumptions (e.g., the object is a fruit), remind them that they are looking at a completely unknown object and describing it to someone who has never seen one either. Then explain:

   The high commander has received your transmission, but she is still puzzled. She wants you to take a picture of the object, but you discover to your dismay that you forgot to pack the batteries for your digital camera! Make one or several drawings of the object and include labels to provide specific detail. If more questions come up, write them down. The point is not to make a beautiful drawing, but to see the object as clearly as possible. Take about 15 minutes to draw.

4. Ask students to share their drawings with the class. Then collect the oranges and group them together on a desk or table (with a few extra oranges, if possible). Ask groups to come up, one group at a time, and find their orange. Groups should separate their orange from the rest, but leave it on the table until all groups have chosen. If two groups identify the same orange, students must use their drawings and descriptions to defend their choices. (If students have observed well, it should take only a minute or two for every group to find the correct orange.)

5. Ask the class to reflect on what it was like to try and see something as if they had never seen it before. Did drawing the orange change the way they saw it? If so, how? Ask students to rate their observations on a scale of 1-10. Ask what got in the way of their paying attention, and how they might improve the quality of their attention in the future. If there is time, have students write a brief reflection. Remind students to write their name on their work, and collect the sheets in the group's folder

PART II. Using all the senses (40-45 minutes)

1. If a significant amount of time has elapsed between Parts I and II, ask students to recall specific details about what they saw and experienced during Part I. Challenge them to do an even better job of seeing, and remind them of the ways they said they could improve the quality of their attention. Divide students into their groups, pass out the group folders, paper towels, and oranges, and give each student a copy of observation sheet #2.

2. Explain:

   The high commander has received your transmissions and is impressed with all of the details you noticed. She ran the results through a gigantic computer and discovered the object in question is an "orange," an edible fruit. She asks you to continue your investigations of the orange, using all of your senses. She assures you it is safe to remove the outer covering (which she calls a peel) and eat the inside. Carefully "dissect" your orange on the paper towel. You may want to weigh and measure various parts of the fruit. Draw the various parts and label them. Keep track of any questions that

come to your mind. Make sure everyone has an orange section to taste. Record your observations and questions on your observation sheet.

3. After students have had 20 or 25 minutes to work, have them stop and clean up. Ask students to share their observations and questions with their group, and then select at least one thing about oranges that they had not noticed before and three of their most interesting questions about oranges. Each group should write their selected observations and questions on chart paper or an overhead transparency.

4. Bring student back together as a class to discuss what they experienced during their investigations. What words did they use to describe the taste and scent of an orange? Did they make comparisons that an alien might not understand, or use general terms like "good" or "nasty" that a scientist would not accept? Have students rate themselves again on a scale of 1-10. Did their attention improve, decline, or remain about the same? Why? Remind students to write their name on their observation sheet and drawings and put them in the group folder.

PART III. Internet inquiry (40-45 minutes)

1. Read over the observations and questions about oranges listed on the chart paper. Invite students to add any new questions. If possible, show the class a copy of John McPhee's Oranges, which began as an article about oranges and ended as a book as the author found more and more questions to research and answer. Tell students that they will be researching and answering their own questions. (If the questions listed on the chart paper seem thin or not particularly interesting, have students complete the Oranges Anticipation Guide as a way to jumpstart their interest and direct their focus.)

2. Divide the class into groups and ask each group to choose a number of questions for their research. Give each group a copy of the Internet research sheet. Write the names of promising websites on the board (see WEB RESOURCES for a list) and direct students to use print resources as well. Groups can work as a team or each group member can be responsible for answering a particular question. Following each answer or fact, students should indicate the source in parentheses. Encourage students to write new questions in the box provided on the research sheet.

3. Ideally, you should reserve the computer lab for this part of the activity so that every student has access to a computer. However, if this is not possible, try to provide each group with a computer, or stagger research times so that every group has 20 to 30 minutes to conduct their research. If possible, supplement Internet resources with trade books or a trip to the library.

4. Have each group share the results of their research, including how and where they found their information. Add answers and new questions to the chart paper. If students completed the Oranges Anticipation Guide prior to doing their research, allow them to check and change their answers, and provide the correct answers for students who were not able to find them. Add the research sheets to the group folders.

PART IV. Memory and metaphor (40-45 minutes)

1. Discuss the difference between and uses of objective and subjective description. Explain that, while scientists collect data through observations made under controlled conditions, poets and writers connect their observations to experiences, feelings, and imagination to create personal impressions of their subject.

2. Brainstorm any associations students already have about oranges, either from their own experiences or from things that they have read or seen (e.g., movies, books, pictures). Encourage students to use all of their senses to recall their associations as vividly as they can. Make a web of their comments on chart paper or the board.

3. Explain that poets and writers often use comparisons, called similes and metaphors, to describe

things. Give some examples and then invite students to create similes and metaphors for oranges. List their ideas on chart paper or the board.

4. Tell students that, as a class, they will be writing a poem called "Ode to an Orange." (Explain that "ode" means "in praise of," if this is a new term for them.) Read William Carlos Williams' poem "Perfection," which is a surprising example of an ode about a rotten apple.

5. Write "Ode to an Orange" on the board. (As homage to the Williams' poem and a way to get started, you may also want to write '" lovely orange!" as the first line). Tell the class that each student is to write one line of the poem. Each line should include a description, fact, memory, or association about oranges, or use a simile or metaphor to describe an orange. Encourage students to use specific details and active, interesting words to create a vivid picture for the reader.

6. Give students five minutes to compose their lines. As each student reads his or her line out loud, copy it on the board. Have the class help you rearrange the lines into a poem. You may want to repeat one or more lines for poetic effect.

7. Ask students what it was like to study a topic in so many ways. How did each part of the lesson contribute to their understanding of oranges? What did they discover about the different ways their minds work? How could they use this knowledge in school and in their daily lives? Have students write a brief reflection.

Extensions

- Give students the Try This at Home! sheet and encourage them to practice focused observation and different types of seeing on their own. Periodically ask students if they have tried the exercises and ask them to describe what happened when they did.
- Have students compose individual poems or prose pieces, incorporating what they have discovered about oranges. Invite students to share their writing with the class.
- Have each student select a topic to write longer descriptions and launch their own inquiries.
- Have students compare different varieties of oranges or kinds of orange juice (fresh-squeezed, from a carton, or reconstituted). Older students could develop their own rubric and use it to make their comparisons.
- To integrate math as a component of the lesson, have students compare data on the weight and circumference of their oranges and determine ranges, averages, and percentages.

Student Assessment/Reflections

- Oral self-assessment of student quality of attention
- Descriptive writing, reflective writing, and poems
- Completed observation sheets, class charts, anticipation guides, and drawings
- Teacher observations

Anticipation Guide Answers

	Answer	Correct statement

1.	False	Oranges originated in China and India.
2.	False	Brazil is the world's leading orange producer.
3.	False	An orange can be completely green and be perfectly ripe.
4.	False	Oranges contain a lot of Vitamin C, but green peppers contain more.
5.	True	Oranges "breathe" oxygen even after they are picked.
6.	Weird, but true	An orange tree can grow from a lemon seed and vice versa.

IRA/NCTE Standards

1 - Students read a wide range of print and nonprint texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world; to acquire new information; to respond to the needs and demands of society and the workplace; and for personal fulfillment. Among these texts are fiction and nonfiction, classic and contemporary works.

3 - Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics).

4 - Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.

5 - Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.

6 - Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and nonprint texts.

7 - Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and nonprint texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

8 - Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.

11 - Students participate as knowledgeable, reflective, creative, and critical members of a variety of literacy communities.

12 - Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).

read•write•think

International Reading Association NCTE marcopolo

Copyright 2002-2003, IRA/NCTE. All rights reserved.

Name: _____

Oranges Anticipation Guide

(For each statement, mark one response with an X.)

	Statement	True	False	Not sure
1	Oranges originally came from South America.			
2	The United States grows more oranges than any other country.			
3	Oranges that are green are unripe.			
4	Oranges contain more Vitamin C than any other fruit or vegetable.			
5	Oranges "breathe" oxygen even after they are picked.			
6	An orange tree can grow from a lemon seed and vice versa.			

NAME: _____

Observation Sheet #1

Notes	Questions

Your description of the object:

Name:

_____

Observation Sheet #2

(Continue on the back if you need more room.)

See	Touch
Smell	Taste
Hear	Questions

Internet Research Sheet

(Use the back if you need more room.)

Questions	Answers
More Questions	**Weird Facts**

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

NOTICE

Reproduction Basis

X	This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.
	This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").